fifty groups and types of surfactants. However, the instant block copolymer combined with a solvent selective to two of its blocks is never even alluded, and the most preferred surfactant and the only one taught is SDS (claim 9, all Examples, lines 61-67 at col. 26).

In contrast to the publication, the instant application aims at efficiently dispersing carbon tubes or bundles, reaching 50-60 wt% of combined tubes/polymer suspension. Compared to 20-25 mg/liter in the patent, the instant invention enables concentrations of 10,000 mg/liter (Examples 2, 3). Much higher tube concentration is reached despite the fact that the sonication is only mild (50W, see Preparing suspensions in the instant application) compared to the patent (540W, see Example 1 of the patent). The difference is caused by the selection of the surfactant; SDS was found to be a very weak dispergant for the carbon nanotubes (see, WO 02/076888 of the present inventors). Surprisingly, a block copolymer has been found in the present invention to be superior to SDS and to tens of other surfactants.

4. The Smalley's value 20-24 mg/liter nanotubes in 1% surfactant, mentioned by the Examiner, represents 10g surfactant per 20-24 mg nanotubes in one liter, making a ratio of surfactant : tubes of about 500 : 1, whereas the present invention has from 20 : 1 to as low as 1 : 20 (amended claim 1).

5. The applicants further respectfully note, that the Examiner may have erred (on page 2 of her letter) when believing that the patent discloses 20 wt% nanotubes in mixture, because 20 mg/liter would yield 0.002 wt% suspension. It is believed that the instant selection of surfactant, solvent fluid, and the component quantities could not have been either guessed from Smalley or obtained during any reasonable experimenting.

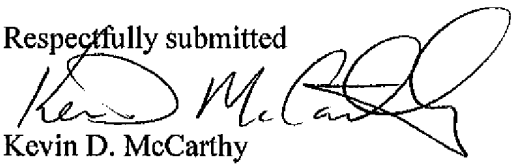
6. It can be seen that the publication aims at discriminating between tubes of different structures and consequentially electronic properties. Since an "as synthesized" CNT powder is composed of a mixture of tubes of different configurations, the fractionation offered by the publication results in dispersion of a very small portion of the tubes, sacrificing efficiency to selectivity. The instant approach is non-selective and generic, enabling to disperse tubes of different structures resulting in a surprisingly high efficiency. Another difference between the techniques is in surfactant interaction with the carbon tubes; the publication relates to micelles or a dense coating of the surfactant on the tubes, forming an insulating layer which was shown to hinder the tube accessibility necessary for electrical applications. In the instant approach, the block copolymer decorates the surface of the tubes, leaving its optical, electrical, an electronic properties essentially unchanged.

Conclusion

7. A person skilled in art, looking for a highly efficient method for suspending carbon nanotubes, would not have found a hint in the cited publication how to proceed in her/his aims, since the publication sets different goals, and teaches SDS. The instant method for the preparation of very dense carbon nanotubes suspensions, comprising block copolymer, solvent selective toward at least two blocks of the copolymer, and carbon nanotubes in a mass ratio of copolymer to nanotubes of from 1:20 to 20:1, is believed to be novel and non-obvious over the cited prior art.

8. It is respectfully submitted that, after the above explanations and amendments, the claims are ready for allowance.

Respectfully submitted



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